microconidia (< 5 mμ). These propagules become air-born and are accidentally inhaled by man; once in the lungs they convert to the tissue e forms. Most patients are adult males engaged in aerosol-generating activities (agriculture, forestry, masonry, speleology), with women and children being afflicted less often. The three mycoses initiate their pathologic expression in the lungs but extra-pulmonary dissemination is common mainly to mucous membranes, skin, lymph nodes, liver, spleen, adrenals, bones, CNS and others; these entities are systemic and one-organ affection is rare. Signs and symptoms may be related to the respiratory tract but are more often referred to secondary lesions making it difficult to confirm suspicion on clinical evidence alone. Image studies vary depending on the diseases' course and include infiltrates, nodules, cavities, pleural retraction, fibrosis and calcifications. Definitive diagnosis is established only on mycological grounds through biopsies, direct examinations and cultures. The three etiologic agents' differential characteristics under the microscope plus the type of propagules produced in cultures, allow their precise identification. Availability of several indirect tests to determine circulating antibodies and antigens and also of several DNA-based tests serve to confirm diagnosis and facilitate follow-up studies. These mycoses are difficult to treat requiring prolonged courses and careful medical supervision. Treatment has greatly improved with the advent of the new triazoles (itraconazole, voriconazole, posaconazole) but amphotericin B remains a major therapy; recovery is contingent on prompt diagnosis, patient's immune status and stage of the mycosis at therapy initiation.

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15.003

Fungal Skin Infections in the Tropics

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The main challenges confronting us in the tropical mycoses are 1) rapid and accurate diagnosis 2) the availability of appropriate therapy and 3) a rising incidence of certain infections. Diagnosis is dependent on the logical association between the clinical appearances and appropriate laboratory steps. However key features of fungi that aid their recognition are their size and the simple cultural and histological techniques used to detect them. Use of conventional histopathology or immunopathological techniques is highly effective in many cases but molecular tools are now used for some conditions including dermatophytosis and sporotrichosis. With some mycoses the process is simpler. In mycetomas, for instance, histological or cultural evidence can be obtained directly from sinuses or by biopsy.

Most new antifungals have not been profiled with tropical mycoses in mind and there are few evidence-based clinical trials to establish usage or duration of therapy. The commonest of these infections that present major therapeutic problems are the mycetomas and chromoblastomycosis. Fungal mycetomas seldom respond to normal doses dapsone, amikacin, fusidic acid, imipenem etc unless they are very extensive. There is only limited reporting of the use of newer azoles, posaconazole and voriconazole in these mycoses. Mycoses where there have been changes in epidemiology, suggesting, spread include tinea capitis. Spread of *Trichophyton tonsurans* infections to South America and West Africa are examples. Whereas HIV in many countries is controlled through the use of antiretrovirals in infected individuals late recognition is a feature in many areas of the tropics and therefore there is a continuing risk of systemic fungal infections presenting with skin lesions as their first and most obvious clinical manifestation. Being alert to these changes provides a rapid means of dealing with these infections.

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15.004

Prevention and Treatment of Nosocomial Candidiasis

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Candidemia is an important nosocomial infection, with high incidence and mortality rates. Strategies for the management of candidemia include prophylaxis and treatment of established infection. Prophylaxis is more likely to benefit groups of patients with high incidence of candidemia, such as premature neonates, allogeneic hematopoietic stem cell transplant recipients and high-risk liver transplant recipients. For the treatment of candidemia, various studies have been conducted comparing different drugs, such as fluconazole, voriconazole, deoxycholate and liposomal amphotericin B, and the echinocandins caspofungin, micafungin and anidulafungin. In general, the echinocandins represent the best option for the initial treatment of candidemia. In addition to prophylaxis and treatment, attempts to define a group of patients that may benefit from early empiric or preemptive have been developed. These include the development of prediction rules and the use of serum biomarkers such as 1,3-beta-D-glucan and polymerase chain reaction-base techniques.

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Plenary 4 (Invited Presentation)

16.001

The Changing Patterns of Global Migration and the Impact on Infectious Diseases

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Human migration has always been associated with disease translocation. Over the last century the speed and volume of international travel and migration has reached unprecedented levels bringing the impact of globalization into every sector of society- economic, environmental, political, socio-cultural, and health. As a consequence, the